

REMARKS

In the Office Action, claims (1, 10), 2, 4, 8, 12, (13, 15), 14, 18, and (21, 22, 23) were provisionally rejected for obviousness type double patenting over claims (1), 18, 17, 10, 14, (17), 18, 19, and (22) of co-pending application serial no. 10/889,429 in view of U.S. Patent No. 4,425,908 to Simon. Applicants submit with this amendment a Terminal Disclaimer to obviate this rejection.

Claims 11, 21 and 22 were objected to for informalities. The foregoing amendments to claims 11, 21 and 22 are believed to overcome these objections. The Terminal Disclaimer obviates the rejection of claims 21-23 and therefore these claims (as well as dependent claims 24 and 25) are believed allowable.

Claims 1-8, and 10-15 were rejected as anticipated by U.S. Patent No. 4,793,348 to Palmaz. Claim 1, as amended, recites a first set of vessel engaging hooks and a second set of vessel engaging hooks, wherein the first set of hooks is axially spaced from the second of hooks so the second set of hooks terminates proximally of the first set of hooks. No such structure is disclosed or suggested in Palmaz. In Palmaz, as shown in the drawings, the tines 50 which are curved to form hooks 50, terminate at the same distance. The axially offset sets of hooks of the invention of claim 1, as explained in the specification, advantageously minimizes the collapsed profile (transverse dimension) of the filter for insertion. Palmaz fails to disclose such structure nor recognize such structure and the attendant advantages. Consequently, withdrawal of the rejection of claim 1 is respectfully requested.

Claims 2-11 depend from claim 1 and are therefore believed patentable for at least the same reasons as claim 1 is believed patentable. Note with respect to claim 9, U.S. Patent No. 6,958,072 to Russell does not satisfy the deficiencies of Palmaz, lacking the hook recitations of claim 1 from which it depends.

With respect to independent claim 12, this claim recites inter alia a filter having a first region having a filter portion having a converging region at a first end portion and a second region of the filter having a mounting portion, with a flared region, for mounting the vessel filter within the vessel. The second region includes a plurality

of struts extending from the filter portion wherein the struts have a first dimension and divide at a first end into oppositely directed struts of a second dimension smaller than the first dimension and then converge with an oppositely directed strut of an adjacent strut.

Palmaz does not teach or suggest a strut dividing into two portions of smaller dimension. As seen in the drawings, the struts of Palmaz do not divide as they are shown to be the same width. By having the struts divide into smaller dimensions as in the invention recited in claim 12, it advantageously reduces the delivery size of the filter, enabling smaller entry sheaths and easier access to the surgical site.

Claims 18-20 were rejected as anticipated by U.S. Patent No. 6,989,021 to Bosma. Claim 18 recites inter alia a filter having a filtering section having a first transverse dimension at a first terminal end of the filter and a mounting section for mounting the filter within the vessel located at a second terminal end of the filter. The mounting section has a second transverse dimension at the second terminal end of the filter which is greater than the first transverse dimension at the first terminal end.

Bosma, in contrast, has a smaller dimension at both terminal ends of the filter since it discloses a filter with two filter portions. These filter portions are on opposite ends of the filter. The region which mounts the filter is positioned between the two filter portions, and thus the larger diameter region is intermediate the two portions. By having the smaller filter regions at both terminal ends, when the Bosma filter is positioned in the vessel, the particles will be directed to the outside of the filter, rather than the central region of the filter as in Applicants' claimed invention due to the structure recited in claim 18. As explained in Applicant's specification, the advantages of directing the particles to the center portion of the filter exposes them to greater blood flow which improves dissolution of the particles. (see e.g. page 8). Consequently, Bosma does not teach or suggest this recited configuration and the rejection of claim 18 should be withdrawn.

Claim 19 depends from claim 18 and is therefore believed patentable for at least the same reasons as claim 18.

Independent claim 20, as amended, recites inter alia that the retrieval region comprises a single hook and that the hook has an inner surface exposed and dimensioned to receive a portion of a retrieval

device. This is shown for example in the embodiment of Fig. 13F. In Bosma, there are two hooks which close off the sides of the distal end. Thus the sheath can't access the hook portion from a side direction. The hook of claim 20 enables such access as an inner surface is exposed. Withdrawal of the rejection of claim 20 is respectfully requested. Note that new dependent claim 26, dependent on claim 20, recites vessel engaging hooks extending from the mounting section to be positioned at a terminal end of the filter, further distinguishing over Bosma which has a filter section at both terminal ends and thus does not have nor would it place engaging hooks at the terminal ends since they would be at the reduced dimension filtering section and not engage the vessel.

Claims 16 and 17 were rejected as obvious over U.S. Patent No. 5,234,304 (Rasmussen) in view of U.S. Patent No. 6,958,074 to Russell. Claims 16 and 17 have been canceled without prejudice or disclaimer.

Applicants respectfully submit that this application is now in condition for allowance. Prompt and favorable reconsideration of the present application is respectfully requested. The Examiner is invited to contact the undersigned should the Examiner believe it would expedite prosecution.

Respectfully submitted,

Dated: 9/21/06

By: Neil D. Gershon

Neil D. Gershon  
Reg. No. 32,225  
Attorney for Applicant

Rex Medical  
1011 High Ridge Road  
Stamford, CT. 06905  
203 329-8750